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TOYOTA TECHNICAL CENTER, U.S.A., INC.

ANN ARBOR BRANCH
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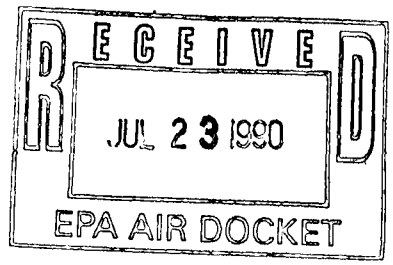
July 20, 1990



Air Docket Section (LE - 131)
U.S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Attention : Docket No. A-90-16

Subject : Toyota's Comments on the Ethyl Corporation Application for a Fuel Additive Waiver

Enclosed herewith are Toyota's comments on the Ethyl Corporation Application for a Fuel Additive Waiver.

These comments are being submitted by Toyota Technical Center, U.S.A., Inc., on behalf of Toyota Motor Corporation of Japan.

If there are any questions regarding the enclosed comments, please contact Mr. Kazuya Kibe of my staff at Engine Engineering Department - Toyota Technical Center, U.S.A., Inc., Ann Arbor Branch.

Sincerely,

Takao Niwa

for Kenji Ito
Executive Vice President

Enclosure

cc : Ms. Mary T. Smith

TOYOTA'S COMMENTS ON THE ETHYL CORPORATIONS APPLICATION FOR A FUEL ADDITIVE WAIVER

Toyota believes that the use of the gasoline additive MMT is a concern for all manufacturers. Further study should be conducted before the use of MMT is approved. Therefore, we request EPA to reject the Ethyl Corporation's application until further study is conducted.

{concerns}

1. Although we have no recent data for concentration under 1/32 g/gallon Mn, our past emission test results with under 1/16 g/gallon Mn indicate an increase of hydrocarbon (HC) emissions. (See attached Fig. 1). Engineering analysis leads us to believe that the reason for HC increase is due to deposit adhesion to combustion chamber and plugging of the catalysts. Therefore, lower additive concentrations will not prevent adverse effects on HC emissions, but the adverse effects will merely occur at a slower pace. Further, the emission control system tested previously is nearly identical to the current emission control system; therefore, current vehicles will also be adversely effected by the use of MMT.

2. Currently, 100,000 mile useful life requirements are being proposed in the U.S. Congress, and already adopted in California. Even if additive concentration is cut in half of that of the last application, it will be more difficult to comply with the long term durability requirements because of the HC increase caused by MMT.

3. In California, more stringent emission standards (Low Emission Vehicle standards) are proposed, the use of MMT may adversely effect compliance with these standards. Further, manufacturers will be required to introduce new emission control technologies to comply with these standards, the effects of MMT on these technologies have not been evaluated. If the use of MMT is granted, manufacturers must evaluate the effects of MMT on new technologies. Evaluating MMT effects in larger burden on manufacturers in addition to what will be required for the reduction of exhaust emissions. This will make compliance with more stringent emission standards very difficult.

4. Currently, vehicle manufacturers and fuel industries have made efforts to develop low emission vehicles and clean fuels. Granting the waiver which may increase HC emissions is counterproductive to these efforts.

5. Since MMT may have adverse effects on public health, more detailed health effects should be performed.

Attachment

Figure 1

DETERIORATION OF HC EMISSIONS